Patent claims

1. An electrooptical module (10) with at least two electrooptical components (30) for connection to at least one optical waveguide (300),

wherein

the at least two electrooptical components (30) are in an optical free-beam connection with the same waveguide (300) by means of at least one lens (60) in each case.

2. The electrooptical module as claimed in claim 1, wherein at least one of the lenses (60) has an optical squint angle.

3. The electrooptical module as claimed in one of the preceding claims, wherein the at least two electrooptical components (30) are arranged symmetrically with respect to their connection to the optical waveguide (300) and the lenses (60) of the at least two electrooptical components (30) respectively have the same optical squint angle.

4. The electrooptical module as claimed in one of the preceding claims, wherein the electrooptical components (30) are arranged on a common carrier (20).

5. The electrooptical module as claimed in claim 4, wherein the lenses (60) are arranged in such a way on a supporting element (50), or a respective supporting element (50), that is located on the carrier (50) that they are located spatially over the electrooptical components (30) assigned to them.

6. The electrooptical module as claimed in one of the preceding claims 1 to 3, wherein the electrooptical components (30) are respectively arranged on an individual auxiliary carrier (610) and the individual auxiliary carriers (610) are arranged on a common carrier (620).

7. The electrooptical module as claimed in claim 6, wherein the lenses (60) are respectively arranged a supporting element that is located on the respective auxiliary carrier (610) in such a way that they are located spatially over the electrooptical components (30) assigned to them.

8. The electrooptical module as claimed in one of the preceding claims, wherein the at least two electrooptical components (30) are lasers and/or light-emitting diodes.

9. The electrooptical module as claimed in claim 8, wherein the lasers and/or light-emitting diodes emit light at different wavelengths.

10. The electrooptical module as claimed in one of the preceding claims 8 or 9, wherein the electrooptical module (10) is a C- or D-WDM module.

11. The electrooptical module as claimed in one of the preceding claims, wherein four lasers (30) and/or light-emitting diodes are assigned to the same optical waveguide (300), the lasers (30) or the light-emitting diodes being arranged symmetrically.

12. The electrooptical module as claimed in claim 11, wherein the four lasers lie on corner points of a virtual or imaginary rectangle, in particular a square.

13. The electrooptical module as claimed in one of claims 1 to 11, wherein the lasers (30) are arranged in a row.

14. The electrooptical module as claimed in one of the preceding claims, wherein at least one of the at least two electrooptical components is an edge-emitting laser (30) and the supporting element (50) is reflectively coated on its outer side (70) or outer sides (70) assigned to the laser or the lasers, the supporting element (50) and the reflectively coated outer sides (70) being arranged in such a way that they direct the light emitted by the laser or by the lasers (30) onto the respectively assigned lens (60).

15. The electrooptical module as claimed in one of the preceding claims, wherein the electrooptical module (10) is accommodated in a TO package and the lenses (60) are optically adjusted respectively with respect to the window cap of the TO package.

16. The electrooptical module as claimed in one of the preceding claims, wherein the electrooptical module (10) is mounted on a ceramic substrate or a flexible printed circuit board (400), in particular a flexboard.

17. The electrooptical module as claimed in claim 16, wherein the flexible printed circuit board (400) is attached, in particular adhesively attached, on a printed circuit board carrier, for example a printed circuit board carrier plate (410).

18. The electrooptical module as claimed in claim 17, wherein the printed circuit board carrier (410) consists of metal, in particular aluminum.

19. The electrooptical module as claimed in one of the preceding claims 16 to 18, wherein the electrooptical module (10) is connected by bonding wires (430) to the flexible printed circuit board (400).

20. The electrooptical module as claimed in one of the preceding claims, wherein the electrooptical module (10, 10') has at least one optical plug-in device for the connection to the at least one optical waveguide (300).

21. The electrooptical module as claimed in one of the preceding claims, wherein the at least one optical waveguide (300) is led through a covering cap (500), with which the electrooptical module (10, 10') is sealed, in particular hermetically sealed.

22. The electrooptical module as claimed in claim 21, wherein the covering cap (500) and the electrooptical module (10, 10') are designed in such a way that the optical adjustment between the optical waveguide (300) and the lenses (60) can take place by an adjustment of the covering cap (500) in relation to the lenses (60).

23. The electrooptical module as claimed in one of the preceding claims, wherein an additional lens (310) is arranged directly on the at least one optical waveguide (300) and is used to couple the light of the electrooptical components into the optical waveguide (300).

24. The electrooptical module as claimed in one of the preceding claims 1 to 22, wherein the at least one optical waveguide (300) has an oblique end face (350), into which the light of the electrooptical components (30) is coupled.

25. The electrooptical module as claimed in one of the preceding claims 1 to 22, wherein the at least one optical waveguide (300) has an end face which is arranged perpendicular to the direction of propagation of the light and is in a direct optical free-beam connection with the lenses (60).

26. The electrooptical module as claimed in one of the preceding claims, wherein an adjusting ring (630) is present, the center point of which lies on the axis of the optical waveguide (300).